

What is claimed is:

1. A robot apparatus comprising: means for judging an autonomous mode or an autonomous/remote collaboration mode; means for executing an autonomous motion when the mode judging means judges said autonomous mode; means for judging a collaboration ratio when the mode judging means judges said autonomous/remote collaboration mode; means for carrying out complete remote motion when the judged collaboration ratio is 100%; and means for executing autonomous/remote collaboration motion when the judged collaboration ratio is not 100%.

2. The robot apparatus according to Claim 1, further comprising: means for judging autonomous reset by which the mode is automatically shifted to an autonomous motion when said complete remote motion is terminated without any abnormality; and means for judging termination by which the mode is automatically shifted to an autonomous motion when said autonomous/remote collaboration motion is terminated.

3. The robot apparatus according to Claim 1 or 2, wherein the autonomous motion executing means includes: means for reading an instruction; means for calculating the present coordinates; means for comparing the read instruction coordinates with the calculated present coordinates; coordinate-shifting means for controlling so that the read

instruction coordinates are made coincident with the calculated present coordinates; and means for executing the read instruction.

4. The robot apparatus according to Claim 3, wherein the instruction executing means includes: means for judging, on the basis of recognition of the image of a photographed subject, whether or not the photographed subject is a target subject; and means for calculating the distance to the target subject.

5. The robot apparatus according to any one of Claims 1 through 4, further comprising a leg portion by which forward/backward motion and left/right turning are carried out.

6. The robot apparatus according to any one of Claims 1 through 5, further comprising left and right arm portions having a plurality of degrees of freedom.

7. The robot apparatus according to Claim 6, wherein the arm portions are provided with protruding fingers that can press a target such as a pushbutton.

8. The robot apparatus according to Claim 6 or 7, wherein the arm portions are provided with opening and closing fingers that can be freely opened and closed.

9. The robot apparatus according to any one of Claims 1 through 8, further comprising: a head portion capable of turning to the left and right and tilting; a stereoscopic image

camera installed at the head portion, which is capable of stereoscopically observing a subject; a fire extinguisher; and a hose having a nozzle, which is disposed at the head portion and jets a fire extinguishing agent from the fire extinguisher via the nozzle.

10. The robot apparatus according to any one of Claims 1 through 9, further comprising a photosensor for detecting obstacles in a predetermined range or an ultrasonic sensor for detecting an obstacles in a predetermined range.

11. A robot remote control system comprising: a robot apparatus according to any one of Claims 1 through 10; and an operation device for remotely controlling the robot apparatus;

wherein said operation device includes: means for judging that the set mode is an autonomous mode or an autonomous/remote collaboration mode; means for judging the collaboration ratio in a case of the autonomous/remote collaboration mode; and means for transmitting mode data showing the judged mode and collaboration ratio data showing the judged collaboration ratio along with the operation data.

12. The robot remote control system comprising: a robot apparatus according to any one of Claims 1 through 10; and an operation device for remotely controlling the robot apparatus;

wherein said operation device includes a stereoscopic

image reproducing unit for reproducing a stereoscopic image, and an operation portion for displaying the status of said robot apparatus; said stereoscopic image reproducing unit includes means for receiving left and right image data transmitted from said robot apparatus, and means for displaying the received left and right image data as a stereoscopic image; and said operation portion includes means for receiving status data from said robot apparatus and means for displaying the received status data.